

TABLE 1.—Free-air temperatures, relative humidities, and vapor pressures during June, 1927

TEMPERATURE (° C.)												
Altitude, m. s. l. (meters)	Broken Arrow, Okla. (233 meters)		Dus West, S. C. (217 meters)		Ellendale, N. Dak. (444 meters)		Groesbeck, Tex. (141 meters)		Royal Center, Ind. (225 meters)		*Wash- ington, D. C. (7 meters)	
	Mean	De- par- ture from 9-year mean	Mean	De- par- ture from 7-year mean	Mean	De- par- ture from 10- year mean	Mean	De- par- ture from 9-year mean	Mean	De- par- ture from 9-year mean	Mean	
Surface.....	23.5	-1.5	23.5	-2.8	16.8	-2.1	25.6	-0.5	19.0	-3.4	24.2	
250.....	23.4	-1.5	23.2	-2.7	16.4	-2.1	24.7	-0.4	18.7	-3.4	22.6	
500.....	22.0	-1.0	20.7	-2.5	16.4	-1.9	22.6	-0.5	16.3	-3.1	19.9	
750.....	20.7	-0.8	19.2	-2.2	15.0	-1.9	21.2	-0.4	15.0	-2.5	18.2	
1,000.....	19.6	-0.6	18.2	-1.7	14.1	-1.4	20.2	-0.2	13.7	-2.2	16.7	
1,250.....	18.5	-0.4	17.3	-0.9	13.0	-1.2	19.1	-0.1	12.5	-1.9	15.1	
1,500.....	17.2	-0.3	16.1	-0.4	12.0	-0.9	18.0	0.0	11.5	-1.5	13.5	
2,000.....	15.0	+0.3	13.0	-0.1	9.1	-1.0	15.2	-0.5	9.3	-1.1	10.8	
2,500.....	12.2	+0.3	9.9	0.0	6.3	-1.0	12.8	-0.3	6.5	-1.1	8.5	
3,000.....	10.0	+1.1	7.2	+0.4	3.9	-0.6	9.9	-0.6	3.8	-1.0	6.5	
3,500.....	6.4	+0.7	3.6	+0.1	1.1	-0.5	6.5	-1.2	1.2	-0.9	-----	
4,000.....	3.4	+0.8	0.2	-0.5	-1.6	-0.4	3.1	-1.9	-1.4	-1.0	-----	
4,500.....	-----	-----	-----	-----	-4.2	+0.1	0.1	-1.9	-5.4	-2.1	-----	
5,000.....	-----	-----	-----	-----	-----	-----	-----	-----	-9.2	-2.1	-----	

RELATIVE HUMIDITY (%)												
Surface.....	77	+5	70	+8	75	+5	80	+6	70	+6	65	
250.....	77	+5	70	+8	75	+5	82	+7	70	+6	66	
500.....	73	+1	73	+8	75	+5	86	+9	73	+8	60	
750.....	72	-6	72	+6	73	+6	86	+10	72	+6	60	
1,000.....	70	-1	73	+6	69	+3	79	+7	70	+4	62	
1,250.....	68	-1	75	+7	68	+3	74	+6	68	+2	60	
1,500.....	66	-1	77	+8	65	+2	70	+6	63	-1	56	
2,000.....	57	-5	78	+8	64	+3	65	+9	57	-3	57	
2,500.....	53	-3	75	+6	69	+10	54	+2	54	+1	44	
3,000.....	47	-5	70	+4	61	+6	52	+3	51	+2	40	
3,500.....	53	+1	62	-2	58	+7	54	+7	44	+2	-----	
4,000.....	62	+10	68	+10	55	+8	62	+15	40	+6	-----	
4,500.....	-----	-----	-----	-----	45	0	70	+19	45	+11	-----	
5,000.....	-----	-----	-----	-----	-----	-----	-----	-----	65	+11	-----	

RELATIVE HUMIDITY (%)

Surface.....	77	+5	70	+8	75	+5	80	+6	70	+6	62
250.....	77	+5	70	+8	75	+5	82	+7	70	+6	65
500.....	73	+1	73	+8	75	+6	86	+9	73	+8	66
750.....	72	0	72	+6	73	+6	86	+10	72	+6	62
1,000.....	70	-1	73	+6	69	+3	79	+7	70	+4	62
1,250.....	68	-1	75	+7	68	+3	74	+6	68	+2	60
1,500.....	66	-1	77	+8	65	+2	70	+6	63	-1	56
2,000.....	57	-5	78	+8	64	+3	65	+9	57	-3	57
2,500.....	53	-3	76	+6	69	+10	54	+2	54	+1	44
3,000.....	47	-5	70	+4	61	+6	52	+3	51	+2	40
3,500.....	53	+1	62	-2	58	+7	54	+7	44	+2	-----
4,000.....	62	+10	68	+10	55	+8	62	+15	40	+6	-----
4,500.....	-----	-----	-----	-----	45	0	70	+19	45	+11	-----
5,000.....	-----	-----	-----	-----	-----	-----	-----	-----	55	+11	-----

WEATHER IN THE UNITED STATES

GENERAL CONDITIONS

The weather of the current June was similar to that of June, 1926, to the extent that both were cool east of the Rocky Mountains. The explanation of the cool weather may be found in the distribution and movement of highs and lows. To what extent this is conditioned upon world-wide pressure distribution is not at present apparent. Atmospheric pressure was unusually low over the northeast Pacific; it was also low over western Europe, except Spain and Italy, and high from Spitzbergen and Iceland to the Azores. In the United States it was high east of the Rocky Mountains and there was a decided increase from the previous month as may be seen from the insets on Charts I and II of this REVIEW.—A. J. H.

CYCLONES AND ANTICYCLONES

Six HIGHS and 13 LOWS were plotted during June. This is the least number for any month so far this year. A minimum number would be expected during June or July, since the temperature contrast between Pole and Equator is likewise at a minimum, with a corresponding reduction of air interchange.

Low No. XI showed an unusual movement. It was first noted on June 28 as the pinched-off lower end of a trough in the Atlantic near latitude 40° N., longitude 55° W; and with high pressure building up to the north and east, it was forced southwestward to Bermuda on the evening of the 30th. From Bermuda it moved slowly northwest to the New England coast during the first few days of July.—W. P. Day.

TABLE 1.—Free-air temperatures, relative humidities, and vapor pressures during June, 1927—Continued

VAPOR PRESSURE (mb.)											
Altitude, m. s. l. (meters)	Broken Arrow, Okla. (233 meters)		Due West, S. C. (217 meters)		Ellendale, N. Dak. (444 meters)		Groesbeck, Tex. (141 meters)		Royal Center, Ind. (225 meters)		* Wash- ington, D. C. (7 meters)
	Mean	De- parture from 9-year mean	Mean	De- parture from 7-year mean	Mean	De- parture from 10- year mean	Mean	De- parture from 9-year mean	Mean	De- parture from 9-year mean	Mean
Surface.....	22.04	-0.57	20.12	-0.72	14.79	-0.71	25.98	+1.39	15.74	-1.88	19.33
250.....	21.79	-0.61	19.81	-0.70	-----	-----	25.33	+1.60	15.57	-1.77	17.68
500.....	19.06	-0.96	18.07	-0.28	14.33	-0.69	23.35	+1.64	13.96	-1.14	15.75
750.....	17.15	-0.91	16.21	-0.54	12.71	-0.47	21.45	+1.77	12.74	-1.03	13.43
1,000.....	15.42	-0.98	15.38	-0.13	11.23	-0.64	18.44	+1.24	11.32	-1.32	12.33
1,250.....	13.95	-0.73	14.80	+0.46	10.14	-0.57	15.97	+0.91	10.15	-1.43	10.86
1,500.....	12.52	-0.53	13.93	+0.77	8.96	-0.56	13.95	+0.84	8.63	-1.71	9.33
2,000.....	9.24	-0.73	11.68	+0.92	7.41	-0.31	10.64	+0.69	6.33	-1.61	7.79
2,500.....	7.23	-0.12	9.14	+0.66	6.61	+0.25	7.25	-0.60	5.04	-0.58	4.82
3,000.....	5.71	+0.16	7.09	+0.47	5.05	+0.14	5.49	-0.80	3.96	-0.19	3.90
3,500.....	5.23	+0.79	5.00	-0.09	4.21	+0.30	4.42	-0.73	2.82	+0.07	-----
4,000.....	5.06	+1.44	4.27	+0.53	3.68	+0.49	3.84	-0.51	2.23	+0.53	-----
4,500.....	-----	-----	-----	-----	2.88	+0.37	3.21	-0.65	1.90	+0.62	-----
5,000.....	-----	-----	-----	-----	-----	-----	-----	-----	1.81	+0.62	-----

* Naval air station.

THE WEATHER ELEMENTS

By P. C. DAY

PRESSURE AND WINDS

The distribution of pressure during the month favored continued cool weather over nearly all central and northern districts from the Rocky Mountains eastward, where the preceding month had likewise been cool, and general coolness extended into most southern districts also, where in some sections monthly temperatures had been continuously above normal since January. It also favored frequent precipitation over many southern districts where the State averages were mainly in excess of the normal.

June opened with general low pressure over the Southwest, and by the morning of the 3d a well-defined cyclone was central over the eastern portions of Kansas and Oklahoma, and considerable precipitation had occurred over the central valleys, and from the middle Mississippi Valley eastward to the Atlantic coast where secondary lows had developed. By the morning of the 4th the main storm center had advanced to the lower Lakes and important rains had fallen from the lower Missouri Valley eastward to the Appalachian Mountains, continuing during the following 24 hours to New England and the lower St. Lawrence Valley.

Rain again set in on the 5th and 6th over the southern Plains and local thundershowers prevailed over the Southeast for several days following. At the same time a moderate cyclone passed along the northern border from western Montana to New England, attended by rather general but mostly light precipitation.